BRUHATH BANGALORE MAHANAGARA PALIKE

Name of the Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	:	Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.
Estimate Cost	:	Rs.

QUALITY CONTROL REPORTS TO

Asst. Executive Engineer,
Hoodi Sub Division,
BBMP, Bangalore.

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QUALITY CONTROL REPORTS FOR

CIVIL WORKS

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T-2377

Job No.: CTCE/BBMP/W.No.12/KRIDL/CSR-01/752c/SAND-Gradation/2015-16 : 02.02.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 31.01.2015

Date of Testing : 02.02.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.50	90-100	90-100	90-100	95-100
2.36	73.40	60-95	75-100	85-100	95-100
1.18	45.40	30-70	55-90	75-100	90-100
600 Micron	26.40	15-34	35-59	60-79	80-100
300 Micron	13.90	5-20	8-30	12-40	15-50
150 Micron	4.90	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

Note:

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****

VISHWANATH .C
Quality Manager

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ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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T-2377

Job No.: CTCE/BBMP/W.No.12/KRIDL/CSR-//SAND-Gradation/2015-16 : 06.02.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

*** Agency** : **Technical Manager (West),** KRIDL, Bangalore.

*** Name of Work** : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 31.01.2015

Date of Testing : 06.02.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	95.00	90-100	90-100	90-100	95-100
2.36	76.50	60-95	75-100	85-100	95-100
1.18	50.50	30-70	55-90	75-100	90-100
600 Micron	32.00	15-34	35-59	60-79	80-100
300 Micron	16.50	5-20	8-30	12-40	15-50
150 Micron	5.00	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Quality Manager

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QUALITY CONTROL REPORTS FOR

WET MIX MACADAM (WMM)

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/Gradation/2014-15

11.02.2015

GRADATION FOR WMM

MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **7825**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	135	135	1.7	98.3	95-100
22.4	2510	2645	33.8	66.2	60-80
11.2	1210	3855	49.3	50.7	40-60
4.75	1015	4870	62.2	37.8	25-40
2.36	995	5865	75.0	25.0	15-30
0.600	870	6735	86.1	13.9	8-22
0.075	770	7505	95.9	4.1	0-8

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ಪಿನ್.ಎಂ ಕಚೇರಿ, ಯಶವಂತಪುರ, ಬೆಂಗಳೂರು

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11.02.2015

GRADATION FOR WMM

MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8080**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	235	235	2.9	97.1	95-100
22.4	2510	2745	34.0	66.0	60-80
11.2	1310	4055	50.2	49.8	40-60
4.75	1080	5135	63.6	36.4	25-40
2.36	985	6120	75.7	24.3	15-30
0.600	865	6985	86.4	13.6	8-22
0.075	760	7745	95.9	4.1	0-8

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/Gradation/2014-15 11.02.2015

GRADATION FOR WMM

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Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **7555**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	130	130	1.7	98.3	95-100
22.4	2455	2585	34.2	65.8	60-80
11.2	1250	3835	50.8	49.2	40-60
4.75	990	4825	63.9	36.1	25-40
2.36	855	5680	75.2	24.8	15-30
0.600	815	6495	86.0	14.0	8-22
0.075	710	7205	95.4	4.6	0-8

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Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8270**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	260	260	3.1	96.9	95-100
22.4	2510	2770	33.5	66.5	60-80
11.2	1300	4070	49.2	50.8	40-60
4.75	1085	5155	62.3	37.7	25-40
2.36	995	6150	74.4	25.6	15-30
0.600	890	7040	85.1	14.9	8-22
0.075	780	7820	94.6	5.4	0-8

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11.02.2015

GRADATION FOR WMM

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Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8090**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	330	330	4.1	95.9	95-100
22.4	2585	2915	36.0	64.0	60-80
11.2	1210	4125	51.0	49.0	40-60
4.75	1095	5220	64.5	35.5	25-40
2.36	995	6215	76.8	23.2	15-30
0.600	835	7050	87.1	12.9	8-22
0.075	780	7830	96.8	3.2	0-8

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Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8435**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	355	355	4.2	95.8	95-100
22.4	2615	2970	35.2	64.8	60-80
11.2	1210	4180	49.6	50.4	40-60
4.75	1185	5365	63.6	36.4	25-40
2.36	990	6355	75.3	24.7	15-30
0.600	885	7240	85.8	14.2	8-22
0.075	840	8080	95.8	4.2	0-8

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/Gradation/2014-15

11.02.2015

GRADATION FOR WMM

MORTH TABLE-400-11

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Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **7910**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	310	310	3.9	96.1	95-100
22.4	2615	2925	37.0	63.0	60-80
11.2	1205	4130	52.2	47.8	40-60
4.75	1050	5180	65.5	34.5	25-40
2.36	965	6145	77.7	22.3	15-30
0.600	890	7035	88.9	11.1	8-22
0.075	760	7795	98.5	1.5	0-8

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ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಂ.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/Gradation/2014-15

11.02.2015

GRADATION FOR WMM

MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of Work : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **7740**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	250	250	3.2	96.8	95-100
22.4	2485	2735	35.3	64.7	60-80
11.2	1185	3920	50.6	49.4	40-60
4.75	1080	5000	64.6	35.4	25-40
2.36	985	5985	77.3	22.7	15-30
0.600	865	6850	88.5	11.5	8-22
0.075	775	7625	98.5	1.5	0-8

Note:

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11.02.2015

GRADATION FOR WMM

MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

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Name of Work : Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.

Reference : EE/DD/WO/46/2014-15 Dated: 25.06.2014

Date of Testing : 11.02.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8070**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	325	325	4.0	96.0	95-100
22.4	2515	2840	35.2	64.8	60-80
11.2	1245	4085	50.6	49.4	40-60
4.75	1050	5135	63.6	36.4	25-40
2.36	955	6090	75.5	24.5	15-30
0.600	855	6945	86.1	13.9	8-22
0.075	770	7715	95.6	4.4	0-8

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Job No.: CTCE/BBMP/W.No.12/KRIDL/WMM/AIV/2014-15 11.02.2015

Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.
Reference	EE/DD/WO/46/2014-15 Dated: 25.06.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	11.02.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	386	387	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	301	
4	Aggregate Impact value = percent fines	22.02	22.22	
	100* (W_2/W_1)%			22.12

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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Aggregate Impact Value

IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	Improvements to Main & Cross Road at Kodandaramaswamy temple back side area & Kammagondanahalli in Ward No.12, BBMP, Bangalore.
Reference	EE/DD/WO/46/2014-15 Dated: 25.06.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	11.02.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	390	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	80	81	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	309	309	
4	Aggregate Impact value = percent fines	20.57	20.77	
	100* (W_2/W_1)%			**20.67**

Civil-Tech Consultants & Engineers Bangalore

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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